IN THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claim 1 (Previously presented): An apparatus for a scanning microscope, in particular a scanning force microscope, comprising a measurement probe which defines a near field, and having a scanning unit which allows the measurement probe to move relative to a sample in all three spatial directions, in conjunction with a mass spectrometer with an ionization unit, an extraction unit and an analysis unit, wherein the measurement probe has a hollow tip so that the near field of the measurement probe can be used by the ionization unit in such a way that ions are formed only in the near field of the measurement probe, and the shape of the measurement probe allows an essentially axially symmetrical field distribution of the extraction unit with respect to the axis of the analysis unit.

Claim 2 (Previously presented): The apparatus as claimed in claim 1, wherein the measurement probe is a cantilever.

Claim 3 (Previously presented): The apparatus as claimed in claim 1, wherein the sample can be moved in all three spatial directions by means of the scanning unit.

Claim 4 (Previously presented): The apparatus as claimed in claim 1, wherein the ionization unit has a laser, light beams which are indicated by the laser are focused off-axis and are then deflected by means of a mirror in an axial direction, with the mirror having an axial hole which allows the ions to pass through to the analysis unit.

Claim 5 (Previously presented): The apparatus as claimed in claim 1, wherein the ionization unit has a laser, and light beams which are indicated by the laser are deflected by means of a mirror in an axial direction and are then focused by means of a focusing device, with the mirror and the focusing device each having an axial hole which allows the ions to pass through to the analysis unit.

Claim 6 (Previously presented): The apparatus as claimed in claim 1, wherein the ionization unit has a laser, and light beams which are indicated by the laser are passed to the measurement probe and cause ionization in the near field of the measurement

probe by means of field amplification.

Claim 7 (Currently amended): A method for high-resolution examination of a measurement sample using a combined scanning probe microscope, in particular a scanning force microscope, wherein the scanning probe microscope is first of all used to record an image of the measurement sample, in particular of the topography of the measurement sample, and wherein a mass spectrometer is then used for destructive, chemical characterization of at least subareas of sections of the measurement sample which are covered by the image,

wherein the information from scanning probe microscopy and from mass spectrometry can be compared with high lateral resolution.

Claim 8 (Previously presented): The method as claimed in claim 7, wherein the selected areas are chosen successively such that the entire area imaged by the scanning probe microscope is analyzed, thus additionally resulting in a chemical image of the sample.

Claim 9 (Previously presented): The method as claimed in claim 7, wherein further ablation of the measurement sample leads

to high-resolution depth information.

Claim 10 (Currently amended): The method as claimed in claim 7, wherein the distance between two points for ionization can be chosen by analysis of the area ablated by an ionization process, such that this leads to uniform ablation [[or]] of the measurement sample.

Claim 11 (Cancelled):

Claim 12 (Previously presented): An apparatus for a scanning microscope, comprising a measurement probe which defines a near field and a scanning unit which allows the measurement probe to move relative to a sample in all three spatial directions in conjunction with a mass spectrometer with an ionization unit, an extraction unit and an analysis unit, wherein the measurement probe has a hollow tip so that the near field of the measurement probe can be used by the ionization unit such that ions are formed only in the near field of the measurement probe, and a shape of the measurement probe allows an essentially axially symmetrical field distribution of the extraction unit with respect to an axis of the analysis unit.

Claim 13 (Previously presented): The apparatus as claimed in claim 12, wherein the measurement probe is a cantilever.

Claim 14 (Previously presented): The apparatus as claimed in claim 12, wherein the sample can be moved in all three spatial directions by means of the scanning unit.

Claim 15 (Previously presented): The apparatus as claimed in claim 12, wherein the ionization unit has a laser, and light beams from the laser are focused off-axis and are then deflected by means of a mirror in an axial direction, the mirror having an axial hole which allows the ions to pass through to the analysis unit.

Claim 16 (Previously presented): The apparatus as claimed in claim 12, wherein the ionization unit has a laser, and light beams from the laser are deflected by means of a mirror in an axial direction and are then focused by means of a focusing device, the mirror and the focusing device each having an axial hole which allows the ions to pass through to the analysis unit.

Claim 17 (Previously presented): The apparatus as claimed in claim 12, wherein the ionization unit has a laser, and light

beams from the laser are passed to the measurement probe and cause ionization in the near field of the measurement probe by means of field amplification.

Claim 18 (Currently amended): A method for high-resolution examination of a measurement sample using a combined scanning probe microscope, comprising the steps of:

using the scanning probe microscope to record an image of the measurement sample; and

using a mass spectrometer for destructive, chemical characterization of at least subareas of sections of the measurement sample which are covered by the image; and

further comprising a step of comparing information from the scanning probe microscope and from the mass spectrometer with high lateral resolution.

Claim 19 (Previously presented): The method as claimed in claim 18, further comprising a step of selecting areas successively such that an entire area imaged by the scanning probe microscope is analyzed, thus additionally resulting in a chemical image of the measurement sample.

Claim 20 (Previously presented): The method as claimed in

claim 18, further comprising a step of ablating the measurement sample, leading to high-resolution depth information.

Claim 21 (Previously presented): The method as claimed in claim 20, further comprising a step of choosing a distance between two points for ionization by analysis of an area following said step of ablation, resulting in uniform ablation of the measurement sample.

Claim 22 (Cancelled):